



Preliminary Ignition Investigation Report

Ignition Database Index:	1083
Electric Incident Investigation (EII) Number:	N/A
HAWC Incident Name:	N/A
PG&E Facility Ignition	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	July 6, 2022 0650 hours
Street Address:	[REDACTED]
City:	Santa Rosa
County:	Sonoma
Latitude/Longitude:	[REDACTED]
PG&E Division:	Sonoma
High Fire Threat District (HFTD):	Non HFTD
Fire Index Area:	180
Fire Potential Index (FPI) Rating:	R2
Was there a PSPS event at the time of ignition?	No
Failure Driver:	All types of equipment
Failure Sub-driver:	Fault tamer failure
Circuit:	Bellevue 2103
Circuit Protection Zone:	Bellevue 2103552
Nominal Voltage:	12 kV
PG&E Equipment associated with ignition:	Fault tamer
EPSS enabled at time of ignition?	Yes
Fault Type:	No ILIS
Wire Down (Primary)?	No
Lead Agency/Agency Having Jurisdiction:	Customer suppressed fire
Fire Size:	10 feet by 13 feet
FAS Field Remarks:	Fault tamer snuffer/bottom failed, melted and door fell open. Door/fuse replaced. Volts ok.
HAWC Summary:	N/A
Injuries / Fatalities / Property Damage / Media Attention:	No reported injuries, fatalities or property damage and no known media coverage
Weather Conditions:	Temperature 59.6 degrees, Relative humidity 90%, Wind speed 4.2 MPH from the southeast, wind gust of 5.8 MPH
Red Flag Warning (RFW) / High Wind Warning (HWW):	No Red Flag Warning or High Wind Warning in effect at time of incident
911 Standby Relief Time:	N/A
OIS #:	1749659
ILIS #:	N/A
FAS #:	T005672313, T005672516 (duplicate tag)
EPSS Engineer:	[REDACTED]

This report is preliminary and based on available information as of **August 09, 2022**; event data is subject to change based upon subsequently discovered information.

Executive Summary:

On July 6, 2022 at 0702 hours, a PG&E Troubleman was dispatched to the Bellevue 2103 12 kV overhead, distribution circuit near Bennett Valley Road in the community of Santa Rosa in response to reports of a power outage. Upon his arrival in the area, the troubleman was met by a customer who advised him that he saw smoke coming from the base of a pole and he discovered a fire which the customer had suppressed prior to the troubleman's arrival. The troubleman noted the location of the extinguished fire as at the base of pole SAP ID # 104100052 (see figures # 4 & 5 below).

The troubleman indicated that the fault tamer fuse protecting a service transformer failed, melted, and fell open. The transformer (CGC #218196326950) fed three residential customers with one customer sustaining an outage as a result of the fire. The troubleman described the fire size as approximately 10 feet by 13 feet.

Upon further investigation, the troubleman found that the S & C brand fault tamer back-up limiter had failed, melted, and caused the fuse door to open, releasing the fuse that fell to the dry grass beneath the pole. The troubleman replaced the door to the fault tamer and the fuse at the scene.

According to PG&E meteorology, the weather conditions at the time and location of the incident were: temperature 59.6 degrees, relative humidity 90%, wind speed 4.2 MPH out of the southeast, and a wind gust of 5.8 MPH during R2 conditions. The incident occurred in the burn scar area of the 2017 Nuns fire.

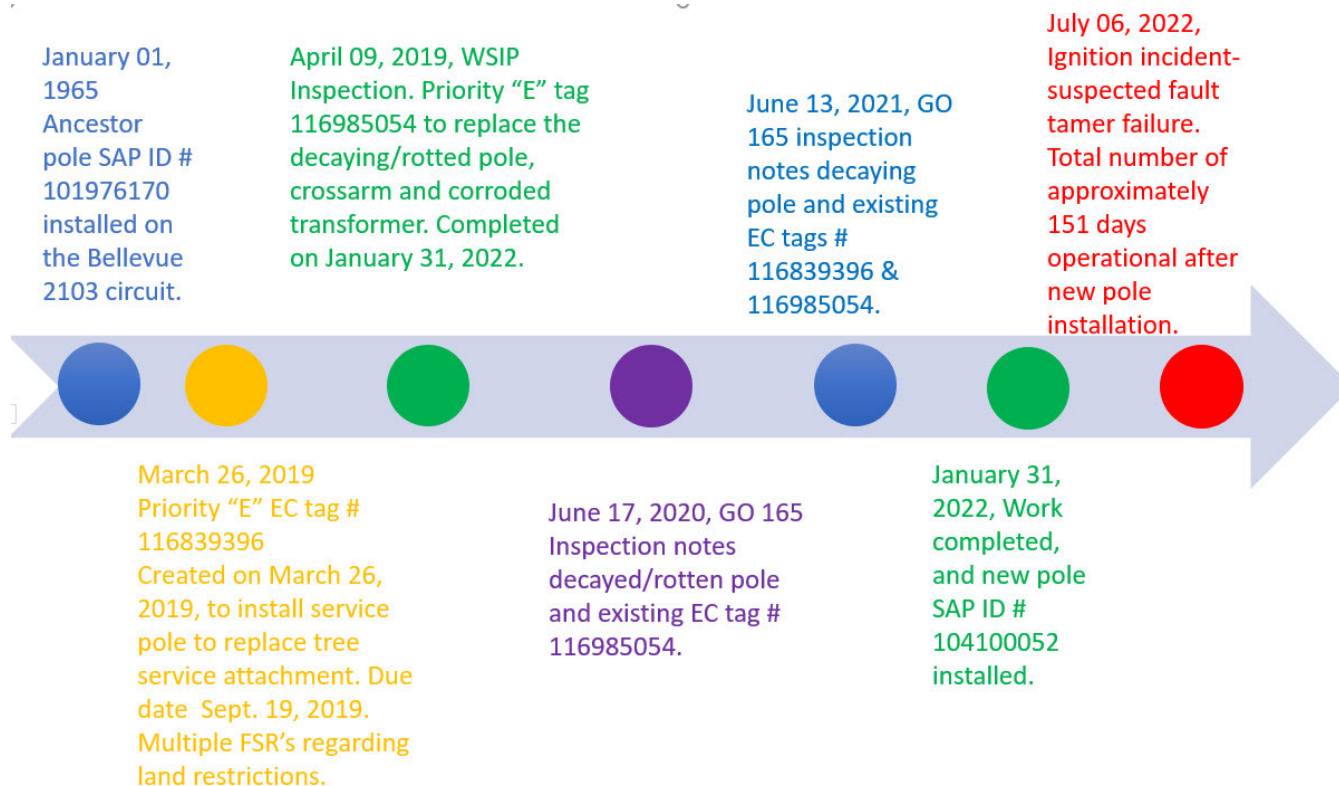
No Electric Corrective (EC) tag was created because of this incident. The troubleman replaced the fault tamer in the field.

According to the North Division Restoration Supervisor, the fault tamer involved in this incident was from a fairly new (January 31, 2022) system hardening project (ancestor pole SAP ID # 101976170).

PG&E's Asset failure Analysis (AFA) team is aware of and tracking this type of back-up limiter failure mode of recently installed fault tamers manufactured by S & C. AFA is also coordinating with the fault tamer manufacturer (S & C) as well as Southern California Edison (SCE) where they have observed this type of back-up limiter failure mode.

AFA requested to retain the fault tamer involved in this ignition incident along with any sister fault tamers and have them sent to Applied Technology Service (ATS) for failure analysis testing. As of August 09, 2022, ATS has not received the S & C fault tamer involved in this ignition incident.

Timeline for Pole SAP ID # 104100052:



EPSS Analysis:

Enhanced Powerline Safety Settings (EPSS) and automatic devices on the Bellevue 2103 circuit have been activated since June 8, 2022. The primary line was protected by an EPSS capable device (Line Recloser 552) at the time of the July 6, 2022 ignition incident.

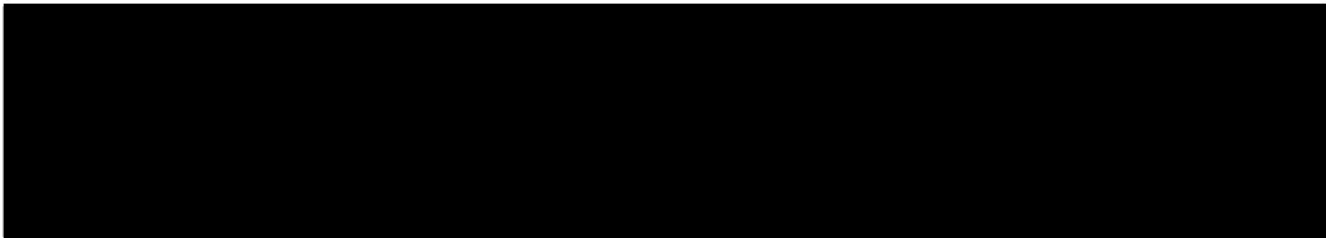
Upstream protective device LR 552 did not register any target for the event and the outage did not affect the mainline.



Bellevue 2103 – Single Line Diagram and Protective Devices

LEGEND							
	Substation		Fuse		Line Recloser		Area of Interest

Device ID	Brand	Type
2103	SEL351/F60	IPAC
Recloser 478	WE	Form 6 – Rev 30
Recloser 552	Viper	Beckwith
Fuse 8449	Part 63	65 E



Ignition Impact:

The ignition resulted in a fire approximately 10 feet by 13 feet in the Bennett Valley Road area in the community of Santa Rosa. The ignition occurred when a fault tamer failed, melted, and caused the fuse door to open releasing the fuse down into the dry receptive fuel bed beneath the pole. There were no reports of any injuries, fatalities or property damage and no known media coverage.

Sequence of Events:

July 6, 2022

- 0650 hours: First No Light (FNL)
- 0702 hours: PG&E Troubleman dispatched to the Bellevue 2103 circuit
- 0727 hours: Troubleman arrives on scene to the Bellevue 2103 circuit
- 0730 hours: Troubleman discovers an extinguished fire at the base of pole SAP ID #104100052
- 0735 hours: Troubleman reports “fault tamer bottom failed, melted and door fell open”
- 0815 hours: Troubleman makes repairs in the field
- 1041 hours: Outage complete time in OMT

Corrective Notification Associated with Ignition:

No Electric Corrective (EC) tag generated as a result of this ignition. Troubleman made repairs in the field.

Pending Work:

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	N/A				
COE Notification	N/A				
LC Notification	N/A				
Veg Work Order	N/A				

Please note this may not include pending major program or project work at the incident location.

Asset Info & Most Recent Inspections and Tests:

Info / Inspection	Most Recent Date	Findings
Install Date:	January 31, 2022 January 01, 1965	Pole SAP ID # 104100052-50 foot tall, Class 3 wood pole Pole SAP ID # 101976170 (ancestor pole)
Inspection:	June 13, 2021	Pole SAP ID # 101976170-Pole broken, damaged, showing signs of rot/decay. Pending EC tag # 116839396 and 116985054.
	June 17, 2020	Pole SAP ID # 101976170-Pole broken, damaged, showing signs of rot/decay. Transformer is suspected as having PCB
Patrol:	July 10, 2019	Helicopter patrol-No abnormal conditions identified
	March 21, 2016	No abnormal conditions identified
Corrective History:	May 24, 2019	EC tag # 116985054- “E” tag to replace Corroded Transformer. Required end date October 09, 2019 Completed.
	April 09, 2019	Replace decayed/rotten pole Replace decayed/rotten crossarm-completed EC tag # 116985054
Aerial Inspection Records:	N/A	
VM Inspection:	N/A	

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EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:		
WSIP Inspection:	April 09, 2019	Priority "E" EC tag # 116985054 to replace the decayed/rotten pole, crossarm and rusted transformer. Original due date of October 09, 2019. Work completed on January 31, 2022.

*Incident Location: Pole SAP ID # 104100052 (ancestor pole SAP ID # 101976170).

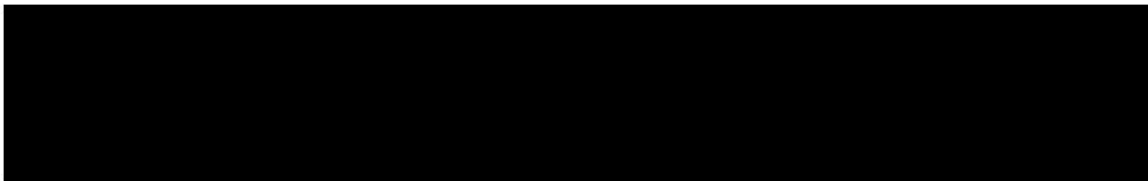
Hazard Barrier Analysis:

Hazard	Fault Tamer Failure				
Target	PG&E Equipment Asset Failure				
Barrier	Objective	Expected Performance	Did Barrier Perform as Expected	Did Barrier Contribute to Incident	Defect
Patrol & Inspection (P&I) Records	Identify any nonconformances with poles or lines.	Inspection or patrol would identify any issues with PG&E equipment.	Yes	No	June 2020 and 2021 inspections noted decay pole. Pole was replaced as part of a system hardening project
Wildfire Safety Inspection Program (WSIP) Inspections in high fire threat districts (HFTD)	Identify any non-conformances with structures in HFTD	Inspection would identify any issue with PG&E equipment.	Yes	No	Priority "E" EC tag # 116985054 to replace pole, crossarm and transformer-work. Completed on January 31, 2022
Enhanced Powerline Safety Settings (EPSS)	De-energize sections of the distribution grid when a fault is experienced to make the line safe.	De-energize sections of the distribution grid until restored after visual inspection.	Yes	No	Upstream protective device LR 552 did not register any target for the event

Potential Next Steps / Associated CAP Items:

- The fault tamer involved in this incident is being sent to Applied Technology Service (ATS) for failure analysis testing.

- Single Line Diagram:



LEGEND



Substation



Fuse



Line
Recloser



Area of
Interest

Photos and Diagrams of Events:

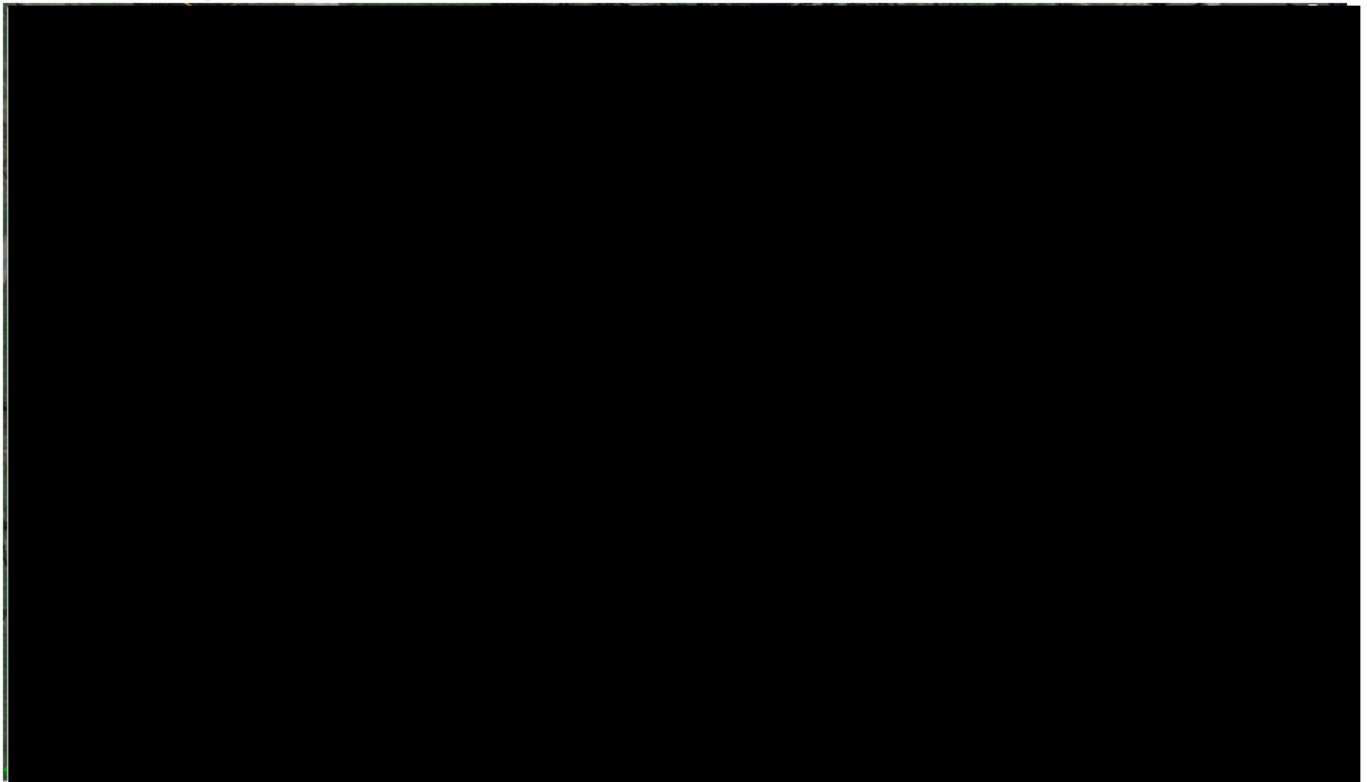


Figure 1 Google Earth overview of incident area with red arrow pointing towards pole SAP ID #10410005.

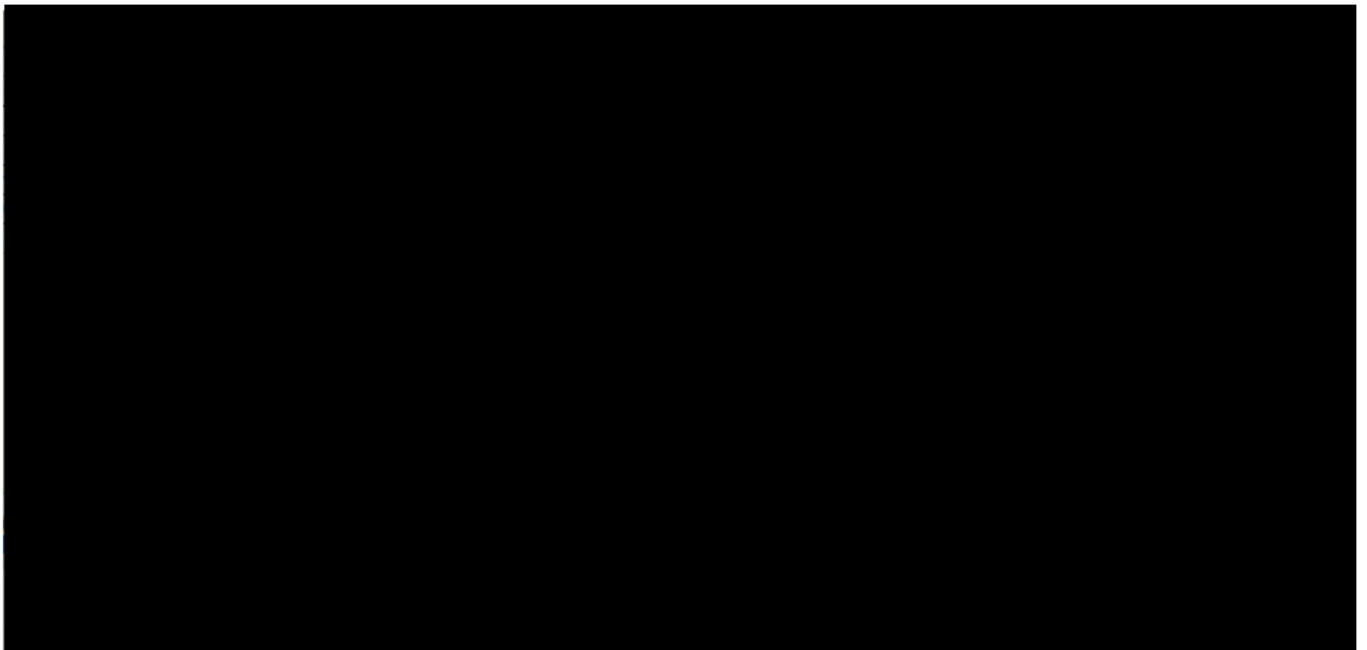


Figure 2 EDGIS overview of Bellevue 2103 circuit incident area.



Figure 3 Photo taken by responding troubleman on July 06, 2022 showing close up of S & C brand fault tamer burnt near the back-up limiter.



Figure 4 Photo taken by responding troubleman on July 06, 2022 of base of pole SAP ID # 104100052 with extinguished fire shown.



Figure 5 Photo taken by responding troubleman on July 06, 2022 of fire at base of pole SAP ID # 104100052 which troubleman described as 10 feet by 13 feet in size.



Figure 6 Photo taken by responding troubleman showing service pole installed from the EC tag generated on March 26, 2019 and new pole SAP ID # 104100052.



Figure 7 Photo taken by the responding troubleman on July 06, 2022 showing incident pole (SAP ID # 104100052) and service pole installed after March 26, 2019 EC tag generated.



Figure 8 June 13, 2021 GO 165 compliance inspection photo.



Figure 9 June 17, 2020 (prior to ignition incident) GO 165 inspection photo of top portion of the pole SAP ID # 101976170.



Figure 10 June 17, 2020 (prior to ignition incident) GO 165 inspection photo of pole SAP ID # 101976170.

Attachments

Attachments and references are located in the ESA folder, located below:

[REDACTED]
[REDACTED]

-----END of REPORT-----